



# Upgrading and Downgrading ROM Monitor Software on Cisco CRS-1 Routers

This appendix describes how to upgrade or downgrade the ROM Monitor software on a Cisco CRS-1.

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## Information About ROM Monitor Software

Before upgrading or downgrading ROM Monitor software, you should understand the following concept:

- [ROM Monitor Upgrade and Downgrade Basics, page B-1](#)

## ROM Monitor Upgrade and Downgrade Basics

The ROM Monitor, which is also known as ROMMON, is a bootstrap program that initializes the hardware and boots the Cisco IOS XR software when you power on or restart a Cisco CRS-1. ROM Monitor upgrades can be required to resolve software defects or support new features. Typically, ROM Monitor upgrades are infrequent and not required for every Cisco IOS XR software upgrade.



Tip

Information on operating the router in ROM Monitor mode is provided in [Appendix A, “Router Recovery and Management with ROM Monitor.”](#)

In the Cisco CRS-1, two copies of ROM Monitor exist: ROMMON A and ROMMON B. During power on, ROMMON A loads first. If ROMMON A detects the presence of ROMMON B, it checks the compatibility and integrity of the ROMMON B code. If ROMMON B passes these tests, ROMMON A passes control of the router to ROMMON B.

The upgrade and downgrade procedures for ROM Monitor are the same. During the upgrade or downgrade process, you select the firmware that is used for ROM Monitor. This firmware can represent an upgrade or a downgrade. The firmware must be compatible with the hardware, but it need not be a later version of the ROM Monitor already installed. During an upgrade or downgrade, the firmware is copied into hardware EEPROMs in the router.

ROM Monitor operates on every node within the router. For most upgrades, we recommend that you upgrade ROM Monitor on all nodes. However, the software does allow you to upgrade a single node, and this is useful when moving a card between two routers or adding a card that is not running the preferred ROM Monitor version. When you upgrade a single node that uses ROM Monitor in both the CPU0 and SP modules, such as a line card node, we recommend that you upgrade both modules to the same ROM Monitor version.

The ROM Monitor firmware is distributed in a .tar package file. The individual filenames are:

- rommon-hfr-ppc7450-sc-dsmp-A.bin
- rommon-hfr-ppc7450-sc-dsmp-B.bin
- rommon-hfr-ppc7455-asmp-A.bin
- rommon-hfr-ppc7455-asmp-B.bin
- rommon-hfr-ppc8255-sp-A.bin
- rommon-hfr-ppc8255-sp-B.bin

The filenames are fixed and do not include version information, which is stored within the file and in the tar file name. When upgrading ROM Monitor, it is best to unpack the tar file only when you are ready to install the file. This way, you can be sure which version you are installing. The format for the tar file name is:

`rommon-version.tar`

The version component of the filename is a version number, such as 1.19.

To prepare for a ROM Monitor upgrade, the tar file must be copied to a workstation that can unpack the file. Next, the individual files must be copied to the root directory of a router device (for example, disk0:).

During a ROM Monitor upgrade, the software detects each card type and automatically selects the correct file for the upgrade on that card. ROM Monitor is typically updated less frequently than the run-time router software. To see if the ROMMON for your router needs to be updated, see the ROMMON version information at the following URL:

<http://www.cisco.com/cgi-bin/tablebuild.pl/crs1rommon>

If only one ROM Monitor tar file is listed, no updates are available. If more than one ROM Monitor tar file is listed, compare your ROM Monitor version (**show diag** command) with the version numbers posted.

If multiple tar files are listed on the web site, the software distribution website specifies whether only ROMMON B or both ROMMON A and ROMMON B should be upgraded. When you upgrade only ROMMON B, the router can still use the unmodified ROMMON A if the ROM Monitor upgrade is interrupted or fails for any reason. If the new ROM Monitor is not compatible with the older installed version, both ROMMON A and ROMMON B must be upgraded.

# How to Upgrade or Downgrade ROM Monitor

This section contains the following procedures:

- [Upgrading or Downgrading ROM Monitor, page B-3](#)

## Upgrading or Downgrading ROM Monitor

The following procedure upgrades or downgrades the ROM Monitor using the six ROM Monitor upgrade files, which are packaged in a .tar file.

### Prerequisites

Before starting the procedure described in the next section, do the following:

- Determine if there is an upgrade tar file for your version of Cisco IOS XR software. If only one tar file is listed on the upgrade web site, no updates are available. You can display the ROM Monitor tar files at the following URL:  
<http://www.cisco.com/cgi-bin/tablebuild.pl/crs1rommon>
- To prepare for a ROM Monitor upgrade, copy the tar file to a workstation that has the software to unpack tar files, then unpack the files.
- Upgrade the ROMMON firmware before downloading any new Cisco IOS XR software installation files to the local storage device of the router. The Cisco IOS XR software files may not be available if you conduct a single failover during the ROMMON upgrade procedure. For example, if you download the Cisco IOS XR software files to disk0 on RP0, upgrade the ROMMON firmware, and then failover to RP1, the Cisco IOS XR software installation files located on disk0 of RP0 will not be accessible from the new active RP. You can also perform an additional RP failover to return the active role to the original RP.

### SUMMARY STEPS

1. **show diag**
2. **copy source destination**
3. **dir device**
4. If you are upgrading only ROMMON B, go to Step 10.
5. **show platform**
6. **admin**
7. **upgrade rommon A {all | [location nodeID]} device**
8. **exit**
9. **show logging | include burner**
10. **show platform**
11. **admin**
12. **upgrade rommon B {all | [location nodeID]} device**
13. **exit**
14. **show logging | include burner**

15. If you are upgrading a router with a single RP, go to Step 21.
16. If you are upgrading a single node on a router, go to Step 23.
17. **redundancy switchover**
18. **redundancy switchover**
19. **hw-module location *nodeID* reload**
20. Go to Step 24.
21. **reload**
22. Go to Step 24.
23. **hw-module location *nodeID* reload**
24. **show diag**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<p><b>show diag</b></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# show diag</p>	<p>Displays hardware information and ROM Monitor information for each node in the router.</p> <ul style="list-style-type: none"> <li>Review the command display to determine which version of ROM Monitor is in use on each node. If the correct version is in use, there is no need to upgrade.</li> </ul>
Step 2	<p><b>copy source destination</b></p> <p><b>Example:</b> RP/0/RP0/CPU0:router# copy tftp://223.255.254.254/software/rommon-hfr-ppc7450-sc-dsmp-A.bin disk0: RP/0/RP0/CPU0:router# copy tftp://223.255.254.254/software/rommon-hfr-rommon-hfr-ppc7450-sc-dsmp-B.bin disk0: RP/0/RP0/CPU0:router# copy tftp://223.255.254.254/software/rommon-hfr-rommon-hfr-ppc7455-asm-A.bin disk0: RP/0/RP0/CPU0:router# copy tftp://223.255.254.254/software/rommon-hfr-rommon-hfr-ppc7455-asm-B.bin disk0: RP/0/RP0/CPU0:router# copy tftp://223.255.254.254/software/rommon-hfr-rommon-hfr-ppc8255-sp-A.bin disk0: tftp://223.255.254.254/software/rommon-hfr-rommon-hfr-ppc8255-sp-B.bin disk0: RP/0/RP0/CPU0:router# dir disk0:</p>	<p>Copies the ROM Monitor upgrade files to the router.</p> <ul style="list-style-type: none"> <li>Copy the files to the root directory of any device on the router. For example, you can copy the files to disk0:.</li> </ul>
Step 3	<p><b>dir device</b></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# dir disk0:</p>	<p>Displays the directory contents for a device root directory.</p> <ul style="list-style-type: none"> <li>Verify that the upgrade files appear in the directory.</li> </ul>
Step 4	If you are upgrading only ROMMON B, go to <a href="#">Step 10</a> .	—

	Command or Action	Purpose
Step 5	<p><code>show platform</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# <code>show platform</code></p>	<p>Displays the state of all nodes.</p> <ul style="list-style-type: none"> <li>Review the command display and verify that the state for each node is “IOS-XR RUN.”</li> </ul>
Step 6	<p><code>admin</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# <code>admin</code></p>	<p>Places the router in admin EXEC mode.</p>
Step 7	<p><code>upgrade rommon A {all   [location nodeID]} device</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router(admin)# <code>upgrade rommon A all disk0</code></p>	<p>Upgrades ROMMON A code for one or all nodes using the ROM Monitor code on the specified device.</p> <ul style="list-style-type: none"> <li>To upgrade all nodes, use the <b>all</b> keyword.</li> <li>To update a single node, use the <b>location</b> keyword and enter the node ID displayed by the <b>show platform</b> command.</li> </ul> <p><b>Note</b> If you are upgrading a line card, both the CPU and SP modules should be upgraded to the same ROM Monitor version. To accomplish this with a single command, replace the module part of the location identifier with an asterisk (*). For example, <code>upgrade rommon A location 0/2/*</code>.</p> <ul style="list-style-type: none"> <li>Do not power cycle the router, reload the router, or reset any nodes until all upgrades are completed.</li> </ul>
Step 8	<p><code>exit</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router(admin)# <code>exit</code></p>	<p>Exits admin EXEC mode.</p>
Step 9	<p><code>show logging   include burner</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# <code>show logging   include burner</code></p>	<p>(Optional) Displays all ROM Monitor upgrade messages in the log.</p> <ul style="list-style-type: none"> <li>This step is optional when it is easy to view all ROM Monitor upgrade messages on the router. When the ROM Monitor upgrade messages are mixed with other log messages, this step can make it easier to view the upgrade status.</li> <li>Review the log display and verify that the upgrade for all nodes has been successfully completed.</li> </ul>
Step 10	<p><code>show platform</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# <code>show platform</code></p>	<p>Displays the state of all nodes.</p> <ul style="list-style-type: none"> <li>Review the command display and verify that the state for each node is “IOS-XR RUN.”</li> </ul>
Step 11	<p><code>admin</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# <code>admin</code></p>	<p>Places the router in admin EXEC mode.</p>

	Command or Action	Purpose
Step 12	<p><code>upgrade rommon B {all   [location nodeID]}</code> <code>device</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router(admin)# upgrade rommon B all disk1:</p>	<p>Upgrades ROMMON B code for one or all nodes using the ROM Monitor code on the specified device.</p> <ul style="list-style-type: none"> <li>To upgrade all nodes, use the <b>all</b> keyword.</li> <li>To update a single node, use the <b>location</b> keyword and enter the node ID displayed by the <b>show platform</b> command.</li> </ul> <p><b>Note</b> If you are upgrading a line card, both the CPU and SP modules should be upgraded to the same ROM Monitor version. To accomplish this with a single command, replace the module part of the location identifier with an asterisk (*). For example, <code>upgrade rommon B location 0/2/*</code>.</p> <ul style="list-style-type: none"> <li>Do not power cycle the router, reload the router, or reset any nodes until all upgrades are completed.</li> </ul>
Step 13	<p><code>exit</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router(admin)# exit</p>	Exits admin EXEC mode.
Step 14	<p><code>show logging   include burner</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# show logging   include burner</p>	<p>(Optional) Displays all ROM Monitor upgrade messages in the log.</p> <ul style="list-style-type: none"> <li>This step is optional when it is easy to view all ROM Monitor upgrade messages on the router. When the ROM Monitor upgrade messages are mixed with other log messages, this step can make it easier to view the upgrade status.</li> <li>Review the log display and verify that the upgrade for all nodes has been successfully completed.</li> </ul>
Step 15	If you are upgrading a router with a single RP, go to <a href="#">Step 21</a> .	—
Step 16	If you are upgrading a single node on a router, go to <a href="#">Step 23</a> .	—
Step 17	<p><code>redundancy switchover</code></p> <p><b>Example:</b> RP/0/RP0/CPU0:Router# redundancy switchover</p>	<p>Reloads the active RP in a dual RP router with the upgraded ROM Monitor software.</p> <p><b>Note</b> The <b>redundancy switchover</b> command does not reload the software if the standby RP is not ready to take over.</p>
Step 18	<p><code>redundancy switchover</code></p> <p><b>Example:</b> RP/0/RP1/CPU0:Router# redundancy switchover</p>	<p>Reloads the second RP in a dual RP router with the upgraded ROM Monitor software.</p> <p><b>Note</b> The <b>redundancy switchover</b> command does not reload the software if the standby RP is not ready to take over.</p>

	Command or Action	Purpose
Step 19	<pre>hw-module location nodeID reload</pre> <p><b>Example:</b>  RP/0/RP1/CPU0:Router# hw-module location 0/0/cpu0 reload</p>	Reloads a card in the router. Use the <b>hw-module location nodeID reload</b> command to reload each card where the ROMMON firmware was changed.
Step 20	Go to <a href="#">Step 24</a> .	—
Step 21	<pre>reload</pre>	Reloads the RP in a single RP router with the upgraded ROM Monitor software. <p><b>Note</b> Reloading a single RP router interrupts all service.</p> Use the <b>hw-module location nodeID reload</b> command to reload each additional card where the ROMMON firmware was changed. Each node must be reloaded to activate the new ROMMON firmware. See <a href="#">Step 23</a> .
Step 22	Go to <a href="#">Step 24</a> .	—
Step 23	<pre>hw-module location nodeID reload</pre> <p><b>Example:</b>  RP/0/RP0/CPU0:Router# hw-module location 0/RP0/CPU0 reload</p>	Reloads a single node or all nodes within a router with the upgraded ROM Monitor software. <ul style="list-style-type: none"> <li>Replace <i>nodeID</i> with the node ID you specified when upgrading ROM Monitor.</li> </ul>
Step 24	<pre>show diag</pre> <p><b>Example:</b>  RP/0/RP0/CPU0:Router# show diag</p>	Displays hardware information and ROM Monitor information for each node in the router. <ul style="list-style-type: none"> <li>Review the command display and verify that the appropriate nodes are using the upgraded version of ROM Monitor.</li> </ul>

## Troubleshooting Tips

- If any node cannot be upgraded successfully or if you see error messages similar to the following message, try reformatting the bootflash (**format bootflash: [location all | nodeID]**) and then repeat this upgrade procedure:
 

```
LC/0/3/CPU0:rommon_burner[65635]: %ROMMON_BURNER-3-FILE_OP_ERR : Opening ROMMON flash partition failed: No such file or directory in function main at line 952
```
- If you are upgrading only ROMMON B and the version does not change to the expected version after the upgrade, the upgrade might have failed. When the router cannot load ROMMON B, it loads ROMMON A.
- If both ROMMAN B and ROMMON A are damaged due to an unexpected node reset or a power interruption during the upgrade, the affected route processors must be returned to Cisco for repair.

## Configuration Examples for ROM Monitor Upgrades

This section provides the following configuration examples:

- [ROM Monitor Upgrade: Example, page B-8](#)

## ROM Monitor Upgrade: Example

The following example shows a ROMMON B upgrade on a router with a single RP:

```
RP/0/RP0/CPU0:Router# show diag

NODE 0/0/SP : MSC(SP)
  MAIN:  type 500060,  0800-019840-1033 rev 01 dev 010cd8
         HW version 0.0  S/N SAD07290129
  PCA:   0073-007648-04 rev 08
  Board State : IOS-XR RUN
  PLD:   Motherboard: 0xf425, Processor: 0x0000, Power: N/A
  MONLIB: QNXFFS Monlib Version 2.2
  ROMMON: Version 1.15(20040603:013227) [CRS-1 ROMMON]

NODE 0/0/CPU0 : MSC(16OC48-POS/DPT)
  MAIN:  type 500060,  0800-019840-1033 rev 01 dev 010cd8
         HW version 0.0  S/N SAD07290129
  PCA:   0073-007648-04 rev 08
  Board State : IOS-XR RUN
  PLD:   Motherboard: 0x0025, Processor: 0xda13, Power: N/A
  MONLIB: QNXFFS Monlib Version 2.2
  ROMMON: Version 1.15(20040603:013406) [CRS-1 ROMMON]

NODE 0/2/SP : 4OC192-POS/DPT PLIM PRESENT

NODE 0/3/SP : MSC(SP)
  MAIN:  type 500060,  0800-025021-259 rev 01 dev 000000
         HW version 0.0  S/N SAD074907X6
  PCA:   0073-007648-06 rev 11
  Board State : IOS-XR RUN
  PLD:   Motherboard: 0xfa25, Processor: 0x0000, Power: N/A
  MONLIB: QNXFFS Monlib Version 2.2
  ROMMON: Version 1.15(20040603:013227) [CRS-1 ROMMON]

NODE 0/3/CPU0 : MSC(16OC48-POS/DPT)
  MAIN:  type 500060,  0800-025021-259 rev 01 dev 000000
         HW version 0.0  S/N SAD074907X6
  PCA:   0073-007648-06 rev 11
  Board State : IOS-XR RUN
  PLD:   Motherboard: 0x0025, Processor: 0xda13, Power: N/A
  MONLIB: QNXFFS Monlib Version 2.2
  ROMMON: Version 1.15(20040603:013406) [CRS-1 ROMMON]

NODE 0/RP0/CPU0 : RP
  MAIN:  type 100000,  0000-000000-00 rev 01 dev 000000
         HW version 0.0  S/N SAD07150223
  PCA:   0073-007641-04 rev 05
  Board State : IOS-XR RUN
  PLD:   Motherboard: 0x0018, Processor: 0xda13, Power: 0x001f
  MONLIB: QNXFFS Monlib Version 2.1
  ROMMON: Version 1.15(20040603:013406) [CRS-1 ROMMON]
```

```
NODE 0/SM0/SP : FC/S
  MAIN: type 400030, 0800-018560-800 rev 01 dev 000000
        HW version 0.0 S/N SAD071701ZD
  PCA: 0073-007302-06 rev 06
  Board State : IOS-XR RUN
  PLD: Motherboard: 0x0019, Processor: 0x0000, Power: N/A
  MONLIB: QNXFFS Monlib Version 2.2
  ROMMON: Version 1.15(20040603:013227) [CRS-1 ROMMON]

RACK 0 : MINIQ
  MAIN: type 0001e2, 65535-16777215-65535 rev XX dev ffffff
        HW version 255.255 S/N TBC06366072
  PCA: 65535-16777215-255 rev XX

RP/0/RP0/CPU0:Router# copy tftp:software/rommon-hfr-ppc7450-sc-dsmp-A.bin disk0:/

Destination filename [/disk0:/rommon-hfr-ppc7450-sc-dsmp-A.bin]?
Accessing tftp://223.255.254.254/software/rommon-hfr-ppc7450-sc-dsmp-A.bin
CCCCCCCCCCCCCCCCCCCC
360464 bytes copied in 1 sec ( 198384)bytes/sec

RP/0/RP0/CPU0:Router# copy tftp:software/rommon-hfr-ppc7450-sc-dsmp-B.bin disk0:/

Destination filename [/disk0:/rommon-hfr-ppc7450-sc-dsmp-B.bin]?
Accessing tftp://223.255.254.254/software/rommon-hfr-ppc7450-sc-dsmp-B.bin
CCCCCCCCCCCCCCCCCCCC
360464 bytes copied in 1 sec ( 198384)bytes/sec

RP/0/RP0/CPU0:Router# copy tftp:software/rommon-hfr-ppc7455-asmp-A.bin disk0:/

Destination filename [/disk0:/rommon-hfr-ppc7455-asmp-A.bin]?
Accessing tftp://223.255.254.254/software/rommon-hfr-ppc7455-asmp-A.bin
CCCCCCCCCCCCCCCCCCCC
372752 bytes copied in 1 sec ( 230093)bytes/sec

RP/0/RP0/CPU0:Router# copy tftp:software/rommon-hfr-ppc7455-asmp-B.bin disk0:/

Destination filename [/disk0:/rommon-hfr-ppc7455-asmp-B.bin]?
Accessing tftp://223.255.254.254/software/rommon-hfr-ppc7455-asmp-B.bin
CCCCCCCCCCCCCCCCCCCC
372752 bytes copied in 1 sec ( 242204)bytes/sec

RP/0/RP0/CPU0:Router# copy tftp:software/rommon-hfr-ppc8255-sp-A.bin disk0:/

Destination filename [/disk0:/rommon-hfr-ppc8255-sp-A.bin]?
Accessing tftp://223.255.254.254/software/rommon-hfr-ppc8255-sp-A.bin
CCCCCCCCCCCCCCCC
252536 bytes copied in 0 sec

RP/0/RP0/CPU0:Router# copy tftp:software/rommon-hfr-ppc8255-sp-B.bin disk0:/

Destination filename [/disk0:/rommon-hfr-ppc8255-sp-B.bin]?
Accessing tftp://223.255.254.254/software/rommon-hfr-ppc8255-sp-B.bin
CCCCCCCCCCCCCCCC
252124 bytes copied in 0 sec

RP/0/RP0/CPU0:Router# dir disk0:
```

Directory of disk0:

```

2          drwx 16384      Tue Jul 20 16:55:00 2004  LOST.DIR
5          drwx 16384      Tue Jul 20 16:56:00 2004  hfr-os-mbi-0.48.0
1237       drwx 16384      Tue Jul 20 17:06:33 2004  instdb
1239       drwx 16384      Tue Jul 20 17:00:44 2004  hfr-base-0.48.0
3630       drwx 16384      Tue Jul 20 16:58:30 2004  shutdown
5225       drwx 16384      Tue Jul 20 17:02:08 2004  hfr-admin-0.48.0
6516       drwx 16384      Tue Jul 20 17:02:40 2004  hfr-fwdg-0.48.0
6870       drwx 16384      Tue Jul 20 17:03:52 2004  hfr-lc-0.48.0
8029       drwx 16384      Tue Jul 20 17:04:46 2004  hfr-rout-0.48.0
4          drwx 16384      Tue Jul 20 17:07:24 2004  config
8900       dr-x 16384      Tue Jul 20 17:22:54 2004  aaa
8908       drwx 16384      Tue Jul 20 17:18:51 2004  usr
8909       drwx 16384      Tue Jul 20 17:18:51 2004  var
66624      -rwx 360464      Tue Jul 20 17:01:56 2004  rommon-hfr-ppc7450-sc-ds
mp-A.bin
66752      -rwx 360464      Tue Jul 20 17:01:56 2004  rommon-hfr-ppc7450-sc-ds
mp-B.bin
66880      -rwx 372752      Tue Jul 20 17:01:58 2004  rommon-hfr-ppc7455-asm-
A.bin
67008      -rwx 372752      Tue Jul 20 17:01:58 2004  rommon-hfr-ppc7455-asm-
B.bin
67136      -rwx 252536      Tue Jul 20 17:02:00 2004  rommon-hfr-ppc8255-sp-A.
bin
67264      -rwx 252124      Tue Jul 20 17:02:00 2004  rommon-hfr-ppc8255-sp-B.
bin

```

1024606208 bytes total (876625920 bytes free)

RP/0/RP0/CPU0:Router# **show platform**

Node	Type	PLIM	State	Config State
0/0/SP	MSC (SP)	N/A	IOS-XR RUN	PWR, NSHUT, MON
0/0/CPU0	MSC	16OC48-POS/DPT	IOS-XR RUN	PWR, NSHUT, MON
0/3/SP	MSC (SP)	N/A	IOS-XR RUN	PWR, NSHUT, MON
0/3/CPU0	MSC	16OC48-POS/DPT	IOS-XR RUN	PWR, NSHUT, MON
0/RP0/CPU0	RP (Active)	N/A	IOS-XR RUN	PWR, NSHUT, MON
0/SM0/SP	FC/S (SP)	N/A	IOS-XR RUN	PWR, NSHUT, MON

RP/0/RP0/CPU0:Router (admin)# **upgrade rommon A all disk0**

Please do not power cycle, reload the router or reset any nodes until all upgrades are completed.

Please check the syslog to make sure that all nodes are upgraded successfully. If you need to perform multiple upgrades, please wait for current upgrade to be completed before proceeding to another upgrade.

Failure to do so may render the cards under upgrade to be unusable.

RP/0/RP0/CPU0:Router#RP/0/RP0/CPU0Jul 20 18:02:04.794 : rommon\_burner[65718]: %ROMMON\_BURNER-5-progress : ROMMON A is programmed successfully.

LC/0/0/CPU0Jul 20 18:19:44.573 : rommon\_burner[65636]: %ROMMON\_BURNER-5-progress : ROMMON A is programmed successfully.

LC/0/3/CPU0Jul 20 18:02:05.380 : rommon\_burner[65636]: %ROMMON\_BURNER-5-progress : ROMMON A is programmed successfully.

SP/0/0/SPJul 20 18:02:05.907 : rommon\_burner[65582]: %ROMMON\_BURNER-5-progress : ROMMON A is programmed successfully.

SP/0/SM0/SPJul 20 18:02:05.950 : rommon\_burner[65584]: %ROMMON\_BURNER-5-progress : ROMMON A is programmed successfully.

SP/0/3/SPJul 20 18:02:06.244 : rommon\_burner[65582]: %ROMMON\_BURNER-5-progress : ROMMON A is programmed successfully.

```
RP/0/RP0/CPU0:Router# show logging | include burner
```

```
RP/0/RP0/CPU0Jul 20 18:02:04.794 : rommon_burner[65718]: %ROMMON_BURNER-5-progre
ss : ROMMON A is programmed successfully.
LC/0/0/CPU0Jul 20 18:19:44.573 : rommon_burner[65636]: %ROMMON_BURNER-5-progress
 : ROMMON A is programmed successfully.
LC/0/3/CPU0Jul 20 18:02:05.380 : rommon_burner[65636]: %ROMMON_BURNER-5-progress
 : ROMMON A is programmed successfully.
SP/0/0/SPJul 20 18:02:05.907 : rommon_burner[65582]: %ROMMON_BURNER-5-progress :
 ROMMON A is programmed successfully.
SP/0/SM0/SPJul 20 18:02:05.950 : rommon_burner[65584]: %ROMMON_BURNER-5-progress
 : ROMMON A is programmed successfully.
SP/0/3/SPJul 20 18:02:06.244 : rommon_burner[65582]: %ROMMON_BURNER-5-progress :
 ROMMON A is programmed successfully.
```

```
RP/0/RP0/CPU0:Router# show platform
```

Node	Type	PLIM	State	Config State
0/0/SP	MSC(SP)	N/A	IOS-XR RUN	PWR,NSHUT,MON
0/0/CPU0	MSC	16OC48-POS/DPT	IOS-XR RUN	PWR,NSHUT,MON
0/3/SP	MSC(SP)	N/A	IOS-XR RUN	PWR,NSHUT,MON
0/3/CPU0	MSC	16OC48-POS/DPT	IOS-XR RUN	PWR,NSHUT,MON
0/RP0/CPU0	RP(Active)	N/A	IOS-XR RUN	PWR,NSHUT,MON
0/SM0/SP	FC/S(SP)	N/A	IOS-XR RUN	PWR,NSHUT,MON

```
RP/0/RP0/CPU0:Router(admin)# upgrade rommon B all disk0
```

Please do not power cycle, reload the router or reset any nodes until all upgrades are completed.

Please check the syslog to make sure that all nodes are upgraded successfully. If you need to perform multiple upgrades, please wait for current upgrade to be completed before proceeding to another upgrade.

Failure to do so may render the cards under upgrade to be unusable.

```
RP/0/RP0/CPU0:Router#LC/0/0/CPU0Jul 20 18:26:56.764 : rommon_burner[65637]: %ROM
MON_BURNER-5-progress : ROMMON B is programmed successfully.
RP/0/RP0/CPU0Jul 20 18:07:30.084 : rommon_burner[65719]: %ROMMON_BURNER-5-progre
ss : ROMMON B is programmed successfully.
LC/0/3/CPU0Jul 20 18:07:30.902 : rommon_burner[65637]: %ROMMON_BURNER-5-progress
 : ROMMON B is programmed successfully.
SP/0/0/SPJul 20 18:07:30.949 : rommon_burner[65583]: %ROMMON_BURNER-5-progress :
 ROMMON B is programmed successfully.
SP/0/SM0/SPJul 20 18:07:31.120 : rommon_burner[65585]: %ROMMON_BURNER-5-progress
 : ROMMON B is programmed successfully.
SP/0/3/SPJul 20 18:07:31.645 : rommon_burner[65583]: %ROMMON_BURNER-5-progress :
 ROMMON B is programmed successfully.
```

```
RP/0/RP0/CPU0:Router# show logging | include burner
```

```
RP/0/RP0/CPU0Jul 20 18:02:04.794 : rommon_burner[65718]: %ROMMON_BURNER-5-progre
ss : ROMMON A is programmed successfully.
LC/0/0/CPU0Jul 20 18:19:44.573 : rommon_burner[65636]: %ROMMON_BURNER-5-progress
 : ROMMON A is programmed successfully.
LC/0/3/CPU0Jul 20 18:02:05.380 : rommon_burner[65636]: %ROMMON_BURNER-5-progress
 : ROMMON A is programmed successfully.
SP/0/0/SPJul 20 18:02:05.907 : rommon_burner[65582]: %ROMMON_BURNER-5-progress :
 ROMMON A is programmed successfully.
SP/0/SM0/SPJul 20 18:02:05.950 : rommon_burner[65584]: %ROMMON_BURNER-5-progress
 : ROMMON A is programmed successfully.
SP/0/3/SPJul 20 18:02:06.244 : rommon_burner[65582]: %ROMMON_BURNER-5-progress :
 ROMMON A is programmed successfully.
LC/0/0/CPU0Jul 20 18:26:56.764 : rommon_burner[65637]: %ROMMON_BURNER-5-progress
 : ROMMON B is programmed successfully.
```

```
RP/0/RP0/CPU0Jul 20 18:07:30.084 : rommon_burner[65719]: %ROMMON_BURNER-5-progress : ROMMON B is programmed successfully.
LC/0/3/CPU0Jul 20 18:07:30.902 : rommon_burner[65637]: %ROMMON_BURNER-5-progress : ROMMON B is programmed successfully.
SP/0/0/SPJul 20 18:07:30.949 : rommon_burner[65583]: %ROMMON_BURNER-5-progress : ROMMON B is programmed successfully.
SP/0/SM0/SPJul 20 18:07:31.120 : rommon_burner[65585]: %ROMMON_BURNER-5-progress : ROMMON B is programmed successfully.
SP/0/3/SPJul 20 18:07:31.645 : rommon_burner[65583]: %ROMMON_BURNER-5-progress : ROMMON B is programmed successfully.
```

```
RP/0/RP0/CPU0:Router# reload
```

```
Proceed with reload? [confirm]
```

```
.
.
.
```

```
RP/0/RP0/CPU0:Router# show diag
```

```
NODE 0/0/SP : MSC(SP)
```

```
MAIN: type 500060, 0800-019840-1033 rev 01 dev 010cd8
      HW version 0.0 S/N SAD07290129
PCA: 0073-007648-04 rev 08
Board State : IOS-XR RUN
PLD: Motherboard: 0xfe25, Processor: 0x0000, Power: N/A
MONLIB: QNXFFS Monlib Version 2.2
ROMMON: Version 1.19(20040603:013227) [CRS-1 ROMMON]
```

```
NODE 0/0/CPU0 : MSC(16OC48-POS/DPT)
```

```
MAIN: type 500060, 0800-019840-1033 rev 01 dev 010cd8
      HW version 0.0 S/N SAD07290129
PCA: 0073-007648-04 rev 08
Board State : IOS-XR RUN
PLD: Motherboard: 0x0025, Processor: 0xda13, Power: N/A
MONLIB: QNXFFS Monlib Version 2.2
ROMMON: Version 1.19(20040603:013406) [CRS-1 ROMMON]
```

```
NODE 0/2/SP : 4OC192-POS/DPT PLIM PRESENT
```

```
NODE 0/3/SP : MSC(SP)
```

```
MAIN: type 500060, 0800-025021-259 rev 01 dev 000000
      HW version 0.0 S/N SAD074907X6
PCA: 0073-007648-06 rev 11
Board State : IOS-XR RUN
PLD: Motherboard: 0xfa25, Processor: 0x0000, Power: N/A
MONLIB: QNXFFS Monlib Version 2.2
ROMMON: Version 1.19(20040603:013227) [CRS-1 ROMMON]
```

```
NODE 0/3/CPU0 : MSC(16OC48-POS/DPT)
```

```
MAIN: type 500060, 0800-025021-259 rev 01 dev 000000
      HW version 0.0 S/N SAD074907X6
PCA: 0073-007648-06 rev 11
Board State : IOS-XR RUN
PLD: Motherboard: 0x0025, Processor: 0xda13, Power: N/A
MONLIB: QNXFFS Monlib Version 2.2
ROMMON: Version 1.19(20040603:013406) [CRS-1 ROMMON]
```

```

NODE 0/RP0/CPU0 : RP
  MAIN:  type 100000,  0000-000000-00 rev 01 dev 000000
         HW version 0.0  S/N SAD07150223
  PCA:   0073-007641-04 rev 05
  Board State : IOS-XR RUN
  PLD:   Motherboard: 0x0018, Processor: 0xda13, Power: 0x001f
  MONLIB: QNXFFS Monlib Version 2.1
  ROMMON: Version 1.19(20040603:013406)  [CRS-1 ROMMON]

NODE 0/SM0/SP : FC/S
  MAIN:  type 400030,  0800-018560-800 rev 01 dev 000000
         HW version 0.0  S/N SAD071701ZD
  PCA:   0073-007302-06 rev 06
  Board State : IOS-XR RUN
  PLD:   Motherboard: 0x0019, Processor: 0x0000, Power: N/A
  MONLIB: QNXFFS Monlib Version 2.2
  ROMMON: Version 1.19(20040603:013227)  [CRS-1 ROMMON]

RACK  0 : MINIQ
  MAIN:  type 0001e2,  65535-16777215-65535 rev XX dev ffffff
         HW version 255.255  S/N TBC06366072
  PCA:   65535-16777215-255 rev XX

```

## Additional References

### Related Documents

Related Topic	Document Title
Hardware component commands	<i>Cisco IOS XR Interface and Hardware Component Command Reference</i>
System management commands	<i>Cisco IOS XR System Management Command Reference</i>

### Technical Assistance

Description	Link
The Cisco Technical Support website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	<a href="http://www.cisco.com/techsupport">http://www.cisco.com/techsupport</a>

